

Appln No. 09/775,315  
Amdt date July 27, 2006  
Reply to Office action of February 27, 2006

### **REMARKS/ARGUMENTS**

In the Final Rejection dated February 27, 2006, the examiner maintained the rejection of claim 10 under 35 U.S.C. § 103(a) as allegedly obvious over Mayer (U.S. Patent No. 5,783,333). However, applicant has canceled claim 10 and added new claim 11 directed to a lithium rechargeable battery. New claim 11 recites a lithium rechargeable battery comprising a positive electrode having a positive active material including lithium manganese oxides and lithium nickel cobalt oxides bonded together by a first binder. The positive electrode further includes a second binder and a conductive agent. Mayer neither teaches nor suggests such features. Rather, Mayer discloses a positive electrode including a positive electrode material, a binder and an electronic conductor. Mayer fails to teach the use of a first binder in the positive active material and a second binder in the positive electrode, as recited in new claim 11. See column 12, lines 29-35, noting that the positive electrode material components are first mixed and *then* combined with a binder and an electronic conductor to form the positive *electrode*. Accordingly, new claim 11 is allowable over Mayer.

The examiner also asserts that the Declaration under 37 C.F.R. § 1.132 filed on December 1, 2005 is insufficient to overcome the rejection over Mayer. Applicant respectfully disagrees. The Declaration evidences the unexpected results achieved by the positive active material of the present invention in which a binder is used both in the formation of the positive active material and in the preparation of the positive electrode. In contrast, the positive electrode disclosed in Mayer uses a binder only in the preparation of the electrode, and not in the formation of the positive active material, as discussed above. Accordingly, Applicant submits that the previously filed Declaration is sufficient to overcome the obviousness rejection over Mayer.

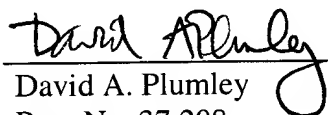
Finally, the examiner maintained the rejection of claims 1-4 under 35 U.S.C. § 103(a) as allegedly obvious over Pynenburg, et al. (U.S. Patent No. 5,429,890) in view of Hasegawa, et al. (U.S. Patent No. 5,370,948). In maintaining this rejection, the examiner asserts that the combination of the metal oxides in Pynenburg is result effective resulting in increased cell

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capacity. However, Pynenburg discloses a combination of oxides including  $\text{Li}_x\text{Mn}_2\text{O}_4$  and one of  $\text{Li}_x\text{NiO}_2$  and  $\text{Li}_x\text{CoO}_2$  and does not disclose the combination of oxides recited in independent claim 1, i.e. lithium manganese oxides and lithium nickel manganese oxides. Therefore, although Pynenburg discloses a ratio of oxides between 1:10 and 10:1, this ratio does not translate to the different mixture of oxides recited in claim 1. In contrast, independent claim 1 recites a weight ratio of lithium manganese oxides to lithium nickel manganese oxides of less than 1:1. Positive active materials having a weight ratio of lithium manganese oxides to lithium nickel manganese oxides of less than 1:1 exhibit unexpected and desirable results, as described in the Rule 132 Declaration of Hyun-Sook Jung previously submitted on December 1, 2005. Hasegawa also fails to teach or suggest a weight ratio of lithium manganese oxides to lithium nickel manganese oxides of less than 1:1. Accordingly, claims 1-4 are allowable over Pynenburg and Hasegawa.

Claims 1-4 and 11 now remain pending in this application. By this amendment, applicant has canceled claim 10 and added new claim 11, which finds full support in the original specification, claims and drawings. No new matter is presented. Applicant submits that all of pending claims 1-4 and 11 are in condition for allowance and therefore respectfully requests a timely indication of allowance. However, if there are any remaining issues that can be addressed by telephone, applicant invites the examiner to contact applicant's counsel at the number below.

Respectfully submitted,  
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